ABSTRACT

WETLAND MONITORING AND ASSESSMENT: DATA CORRELATION FROM RAPID ASSESSMENT METHOD TO SITE SPECIFIC INTENSIVE MONITORING

Jessie Buckner, Danielle Kreeger, Angela Padeletti, Priscilla Cole

Partnership for the Delaware Estuary
110 South Poplar Street
Suite 202
Wilmington, DE 19801

Coastal wetlands are disappearing and becoming more degraded despite strict regulations. To aid in wetland management and protection, in 2006 the United States Environmental Protection Agency (EPA) published a recommendation for monitoring and assessing wetlands as part of the Clean Water Act. The EPA recommended a three-tiered approach consisting of Landscape Assessment, Rapid Wetland Assessment, and Intensive Site Assessment. Several organizations formed a coalition to design and implement an ongoing Mid-Atlantic Coastal Wetland Assessment (MACWA) to look specifically at the tidal wetlands in the Mid-Atlantic on a four-tier assessment scheme based on the EPA recommendation. The premise of the multi-level approach is that successive tiers serve as ground-truthing and help answer questions regarding stressor-response relationships. But to date, no studies have examined such cross-level interrelationships. This study correlates relationships between MACWA Tier 2- probabilistic sampling on the ground using Rapid Assessment Method (RAM) and Tier 4- site specific intensive monitoring (SSIM) of condition and function at a smaller number of fixed stations. Through careful data analysis focusing on only a few metrics: biomass, bearing capacity, and erosion, one can see the relationships between indicators across the tiers. An analysis across watersheds, within watersheds, and measuring similar wetland types across the tiers will examine if there are redundancies, gratuitous steps, or significant measurements which could be furthered with additional assessment metrics. By viewing the cross-tier correlations, scientists gain the broadest spectrum of meaningful data and wetland managers can ascertain which metrics can be most helpful for management purposes, with limited time and budget.